



Environmental Management System Procedure

for

Developing Environmental Objectives and Targets

for the

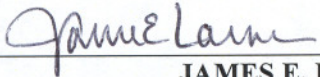
U.S. Army Garrison (USAG) Baumholder

Revision # 1

28 February 2006

Prepared by:

URS Deutschland GmbH, Kaiserslautern
URS Project No. 43863818

<h2 style="text-align: center;">Environmental Management System Documentation of the USAG Baumholder</h2>			
Document Title:			
Environmental Management System (EMS) Procedure for Developing Environmental Objectives and Targets for the U.S. Army Garrison (USAG) Baumholder			
Kind of Document:		Document Unique Identification (UID):	
Standard Operating Procedure (SOP) for EMS		See label provided by Document Control (DOC CON) Officer	
Number of EMS Procedure:		Revision Number:	
EMS_PBH_04A		Rev. # 1	
Update requirements:			
This document is an EMS controlled document. It has to be kept updated in order to comply with International Organization for Standardization (ISO) 14001. This document shall be reviewed annually and revised as necessary or when changes occur. When a revised document is available, this document will be discarded and marked as obsolete in the DOC CON database. The revised document gets a new UID.			
Date Document Effective:		Document POC:	
		Dominic Mutinda DPW EMO	
Approved by:		Date:	
 JAMES E. LARSEN LTC, AV Commanding		<u>20 MAR 06</u>	
References:			
a. Executive Order 13148, Greening the Government through Environmental Leadership. b. ISO 14001: 2004, Environmental Management Systems – Specification with Guidance for Use. c. EMS-Procedure # EMS_PBH_02 – <i>Determining the Significant Environmental Aspects of the Activities, Products and Services of the U.S. Army Garrison (USAG) Baumholder</i> d. EMS-Procedure # EMS_PBH_04B – <i>Establishing, Implementing and Maintaining Environmental Programs at the U.S. Army Garrison (USAG) Baumholder</i>			

1.1 PURPOSE.

The purpose of this procedure is to provide a standard method for the development, review, and communication of environmental objectives and targets for the significant aspects and impacts of the USAG Baumholder, and for any other aspects/impacts deemed so.

1.2 APPLICABILITY.

This procedure applies to all personnel within the USAG Baumholder who are involved in developing, reviewing, or communicating environmental objectives and targets of the USAG Baumholder.

1.3 DEFINITIONS

Cross-functional Team (CFT) — A group of individuals from across the Garrison, appointed either by the Garrison Commander or senior leadership, who will coordinate the support necessary for EMS implementation and are responsible for implementing the EMS Garrison-wide.

EMS Management Representative — An individual appointed by the USAG Baumholder Commander who, irrespective of other duties, is responsible for the operation of the Garrison's EMS and chairs the Garrison's Cross Functional Team (CFT).

Environmental Aspect — The part of an activity, product, or service that interacts with the environment.

Environmental Impact — Any change to the environment that is caused by an environmental aspect.

Environmental Objective — A higher-level, overall environmental goal, arising from the Environmental policy, that the Garrison sets itself to achieve, and which is quantified where practicable.

Environmental Target — A detailed performance requirement, quantified where practicable, applicable to the Garrison or parts thereof, that arises from the environmental objectives and needs to be set and met in order to achieve those objectives.

Significant Environmental Aspect — Any environmental aspect that has or can have a significant environmental impact.

Significant Environmental Impact — Any potential significant change to the environment, wholly or partially resulting from the USAG Baumholder's activities, products or services.

2 PROCEDURE

2.1 Preparatory work

Prior to developing environmental objectives and targets, the CFT has to determine the significant environmental aspects for the USAG Baumholder following EMS procedure # EMS_PBH_02.

As described in that procedure, the aspect ranking is based on the evaluation of the following four criteria for each of the aspects:

- environmental risk (of the associated impacts),
- regulatory compliance status,
- potential mission impact, and
- potential for community concern

2.2 Determination of driver(s) for high ranking

The CFT shall review the aspect assessment database for the drivers for the high ranking of the significant aspects. These drivers need to be considered when setting objectives and targets, because the reason for setting objectives and targets is to lower the ranks for the significant aspects (= to improve environmental performance).

For reviewing the aspect criteria use the “ATAS Report” of the USAG Baumholder aspect assessment database (Open the report menu Figure 1-①, then select ‘ATAS report’ form the report menu Figure 2-②.).

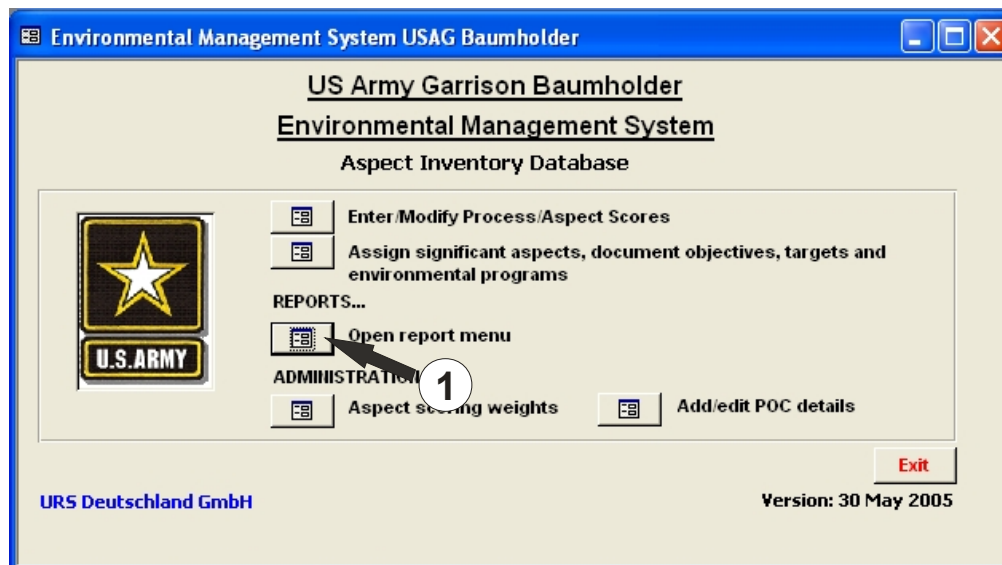


Figure 1: Step 1 for opening the ATAS report in the aspect assessment database

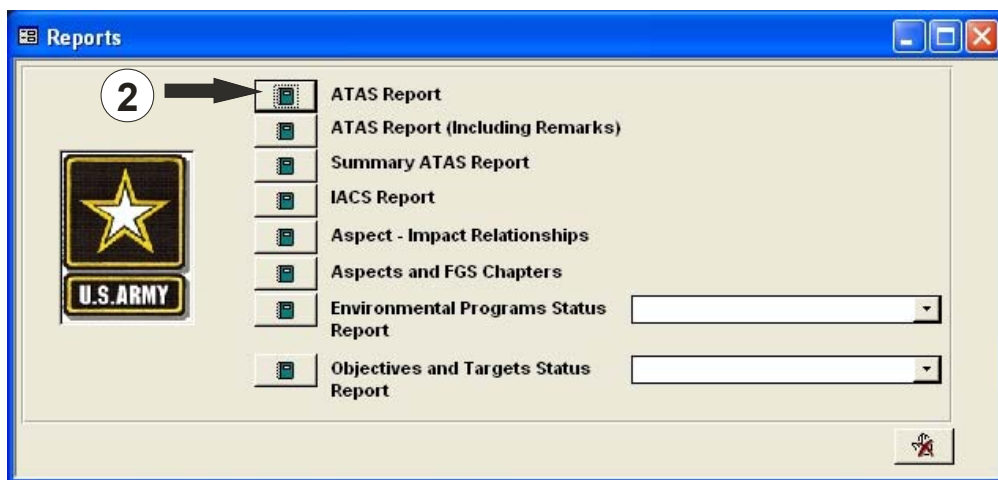


Figure 2: Step 2 for opening the ATAS report in the aspect assessment database

The ATAS report shows the individual aspect combination scores (IACS) for each activity and averages those for the total aspect score (ATAS) a particular aspect:

ENERGY CONSUMPTION (ELECTRICAL ENERGY)	Environmental Risk			Comm. Concern	Mission Degrad.	Regulations	Score
	Probability	Severity	Risk				
A-C and ventilation systems: A-C and ventilation systems	5	1	2	1	2	5 (1)	10
Central compressed air plants / Compressor units: Central compressed air plants / Compressor units	5	1	2	1	1	5 (1)	9
Chillers and refrigeration systems: Chillers and refrigeration systems	5	1	2	1	1	5 (1)	9
General building related processes (e.g. public, admin and maintenance facilities): Administration	5	1	2	1	1	5 (1)	9
Housing/billeting operations: Household activities (kitchen, bathroom, TV etc)	5	1	2	1	1	5 (1)	9
Aspect Score Average:							9,2

5
IACS
↓

1 ATAS

The following examples illustrate how the ATAS report can be used to find out more about the driver for a high ranking.

Example 1:

This aspect applies to three functional area – process - activity combinations.

The process-activity combination “Stormwater handling: Stormwater discharge” has a score of 31 which is high above the average (ATAS) of 22.66667, and therefore is the main driver of the high ATAS. A closer look shows that the high IACS of 31 arises from the score of the aspect criterion “regulatory status”, which is 25 (5), meaning out of compliance. By improving the regulatory status of stormwater discharge practices at the Garrison the IACS will be lowered, and so, the average (ATAS) will be lowered too.

The process-activity combination “HW storage facilities: HW storage areas (HWSAs)” has the lowest IACS (17). For “Sanitary and construction landfill operation: Final disposal/landfill maintenance” the IACS is below the average, too (20). There is a potential to lower the average (ATAS) by reducing environmental risk of “HW storage facilities: HW storage areas (HWSAs)”, which currently is 5.

STORMWATER DISCHARGE	Environmental Risk			Comm. Concern	Mission Degrad.	Regulations	Score
	Probability	Severity	Risk				
HW storage facilities: HW storage areas (HWSAs)	5	2	5	1	1	10 (2)	17
Sanitary and construction landfill operation: Final disposal / landfill maintenance	5	1	2	2	1	15 (3)	20
Stormwater handling: Stormwater discharge	5	1	2	2	2	25 (5)	31
Aspect Score Average							22,6667

Figure 3: ATAS Report for Example 1

Example 2:

In this example the aspect applies for three different functional area – process - activity combinations.

Here “Hospital, pharmacy, and other medical activities: Sterilization and disinfection” has the highest IACS score, and therefore is the main driver for the high ATAS of 25.33333. A look at each aspect criterion shows that the high IACS arises from the potential community concern (5) and a regulatory status score of 20 (4).

The IACS of the remaining activities “Hospital, pharmacy, and other medical activities: Patient care” and “Pathology/mortuary services” have a high score for the regulatory status, too. In this case an improvement of the regulatory status of all three activities is required to reduce the ATAS. Moreover, it can only be of benefit to lower the potential for community concern for “Hospital, pharmacy, and other medical activities: Sterilization and disinfection.”

HAZARDOUS WASTE GENERATION (MEDICAL, INFECTIOUS)	Environmental Risk			Comm. Concern	Mission Degrad.	Regulations	Score
	Probability	Severity	Risk				
Hospital, pharmacy, and other medical activities: Patient care	5	1	2	1	1	20 (4)	24
Hospital, pharmacy, and other medical activities: Sterilization and disinfection	5	1	2	5	1	20 (4)	28
Pathology / mortuary services: Pathology / mortuary services	5	1	2	1	1	20 (4)	24
Aspect Score Average							25,33333

Figure 4: ATAS Report for Example 2

2.3 Definition of environmental objectives for significant environmental aspects

Once the driver(s) for each significant aspect has been identified, the CFT shall formulate objectives for each significant aspect using the driving criterion/criteria as the basis. For every significant aspect at least one objective shall be formulated. For the examples mentioned above the following objectives could be defined:

Example 1:

1. Reduce environmental risk of environmental impacts of stormwater discharge from the HWSA.
2. Bring stormwater discharge into compliance with legal and other requirements.

Example 2:

- 1. Reduce community concern regarding sterilization and disinfection waste.*
- 2. Prevent instances of non-compliance with legal and other requirements concerning hazardous waste generation at hospital, pharmacy and pathology and other medical activities.*

2.4 Defining environmental targets for each objective

The CFT shall set targets to achieve the objectives formulated in the previous step. For each objective at least one target needs to be defined. In order to set targets, the CFT should consider the applicable questions below with regard to each objective:

- What was/is/will be the risk, non-compliance, mission impact, or community concern?
- Why was/is/will there be a risk, non-compliance, mission impact, or community concern?
- What is the acceptable risk or required compliance status?
- How can the risk be minimized or the required compliance status be reached?
- How can mission impact or community concerns be minimized or eliminated?

By answering those applicable questions the CFT can begin developing targets for each of its objectives. To answer those applicable questions, the CFT should:

- Review the comments field for each significant environmental aspect in the USAG Baumholder aspect assessment database. (See Figure 5 to Figure 7 to navigate to the proper screen.)
- Review the respective regulations or other requirements
- Review the last (EPAR) for the USAG Baumholder
- Consult with appropriate Media Managers
- Consult with appropriate Directors/Unit Commanders
- Consult with the PAO

Furthermore, the following should be considered when developing targets:

- USAG Baumholder Environmental Policy
- commitment to pollution prevention
- commitment to continual improvement
- measurable, where practicable
- technological options
- financial, operational and business requirements
- views of interested parties

To find the comments field for each significant environmental aspect, go to the start menu (Figure 5) and click ① to open the functional area/activity window (Figure 6).

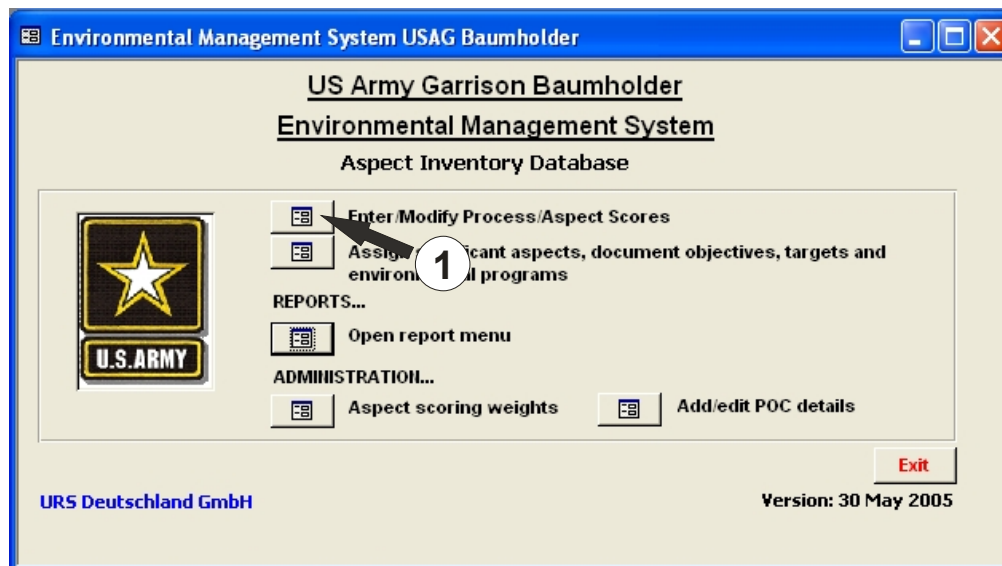


Figure 5: Navigating to the comments field – Aspects database start menu

To navigate to the aspect of interest, select the functional area ①, process ②, and activity, product or service ③.

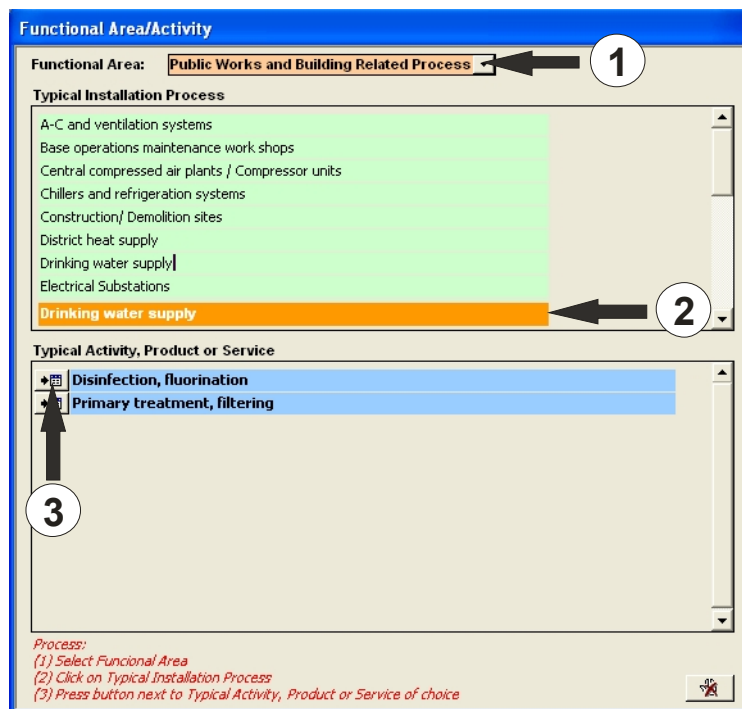


Figure 6: Navigating to the comments field – functional area/activity window

In the aspect window (Figure 7), select the aspect group to which the aspect belongs (①), and check, if the auditor who assessed the aspect has added a remark under ②.

Figure 7: Navigating to the comments field – Aspect window

The following examples for developing targets refer to the aspects and objectives previously shown.

Example 1:

Objective: Reduce environmental risk of potential environmental impacts of stormwater discharge from the HWSA.

Answers to the applicable questions could be:

1. What is the risk?

If the stormwater is not collected properly, there might be a direct discharge of contaminated stormwater to the surroundings of the HWSA. This can cause surface water, soil and/or groundwater contamination. If the water is collected properly, it also needs to be treated prior to discharge. If the potentially contaminated water is not treated, direct discharges could lead to surface water, soil and/or groundwater contamination, and indirect discharges could contaminate the sanitary sewer system, the wastewater treatment plant and its effluent.

2. Why is there a risk?

In our example, the HWSA has an active and an inactive part. Only the active part is used for storing HW. The active part is connected to a separator system for treating stormwater. The inactive part is not connected to such a system. Due to limited space the active area is nearly overloaded. There is a risk that the inactive part of the HWSA

will be used temporarily, and then contaminated stormwater will not be properly collected and treated.

3. What is the acceptable risk or required compliance status?

As soon as the inactive part of the HWSA will be re-activated, be it only temporarily, there will be a high potential for contaminated stormwater to be discharged directly to the soil at a corner of the HWSA. Besides the impact to the environment, the whole HWSA will then be out of compliance. This cannot be tolerated.

4. How can the risk be minimized?

In our example the risk can be minimized by either equipping the inactive part of the HWSA with appropriate stormwater treatment facilities, or by ensuring that the inactive part of the HWSA cannot be used e.g. by blocking it.

Resulting targets could be:

- a) Block the inactive part of the HWSA as soon as possible, but no later than the end of May 05. Ensure the area is not used thereafter.
- b) Fund an upgrade of the inactive part of the HWSA in FY 06.

Example 2:

Objective: *Bring stormwater discharge at the Garrison into compliance with legal and other requirements.*

Answers to the applicable questions could be:

1. What is the non-compliance?

Garrison holds a permit for the discharge of stormwater into the nearby river. This permit requires regular stormwater monitoring, but no monitoring was/is conducted.

2. Why is there non-compliance?

There is an organizational problem within the Garrison DPW. It has not been determined, which department within the DPW is responsible for stormwater monitoring. In consequence, though the requirement for stormwater monitoring is known to both, DPW Utilities and DPW EMO, neither have performed the monitoring. This was a result of a missing system to control environmentally relevant documents, such as permits, monitoring records, etc.

3. What is the required compliance status?

Monitoring must be performed in strict accordance with the discharge permit. In order to establish an ISO 14001 conformant EMS, a document control system for environmentally relevant documents must be implemented.

4. How can the required compliance status be reached?

It can be reached by implementing a monitoring program that meets the requirements of the discharge permit and documenting the monitoring results. In order to achieve this,

coordination between DPW Utilities and DPW EMO will be necessary. A responsible POC needs to be assigned.

Resulting targets could be:

- a) Implement a stormwater-monitoring program that meets the requirements of the discharge permit by the end of May 2005.

2.5 Documentation of objectives and targets

The defined objectives and targets must be inserted in the appropriate fields of the USAG Baumholder aspect assessment database. This may be accomplished following the respective section outlined in EMS procedure # EMS_PBH_02.

LIST OF APPENDICES

Appendix A	Determination of Environmental Objectives and Targets Flow Chart	A-1
-------------------	---	-----

APPENDIX A

Determination of Environmental Objectives and Targets Flow Chart

APPENDIX A

Determination of Environmental Objectives and Targets Flow Chart

